Check List 8(2): 307-309, 2012
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ISSN 1809-127X (available at *www.checklist.org.br*)

Check List
Journal of species lists and distribution

NOTES ON GEOGRAPHIC DISTRIBUTION

New distributional records of Gerromorpha Popov, 1971 (Insecta: Hemiptera: Heteroptera) from Cuba

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ABSTRACT: Distributional records of fourteen species of Gerromorpha, belonging to the families Gerridae, Hebridae, Hydrometridae, Mesoveliidae, and Veliidae, are reported from Cuba. The following species are recorded for the first time from eastern Cuba: *Rheumatobates clanis* Drake and Harris, 1932, *R. meinerti* Schroeder, 1931, *Trepobates pictus* (Herrich-Schäffer, 1848) (Gerridae), *Hydrometra australis* Say, 1832 (Hydrometridae), and *Platyvelia brachialis* (Stål, 1860) (Veliidae).

The infraorder Gerromorpha has approximately 2,100 known species, distributed into eight families and about 160 genera. At least 515 species have been recorded from the Neotropical Region, and more than 100 are yet to be described (Polhemus and Polhemus 2008). According to Naranjo *et al.* (2010), there is a great gap of knowledge concerning the fauna of Gerromorpha from Cuba, but the eastern region of the country is the richest and most diverse portion of the island. Nineteen species of Gerromorpha, belonging to five families and eleven genera, have already been recorded from eastern Cuba, some of which are endemic to the country (Muñoz *et al.* 2010).

The faunistical district of eastern Cuba (de la Cruz 1989) is characterized by its high diversity of landscapes, water bodies dependent of raining seasons, and a high degree of species endemism (Muñiz 1989). The first author of the present study made several collections of aquatic Heteroptera in such area between 2008 and 2010, in both lentic and lotic environments. All material is deposited in the invertebrate collection of the Museo de Historia Natural Tomás Romay, and the records obtained are herein presented. The following abbreviations are used for Cuban faunistical districts and provinces: western Cuba (W) (Isla de la Juventud – IJ, Pinar del Río – PR, Mayabeque – MY); Central Cuba (C) (La Habana – HB, Matanzas – MT, Villa Clara – VC, Sancti Spiritus – SS, Cienfuegos – CF, Camagüey – CM); Eastern Cuba (E) (Holguín – HG, Granma – GR, Santiago de Cuba – SC, Guantánamo – GT). On the lists of examined material, the letter "m" refers to male specimens, the letter "f" to females, and the letter "n" to nymphs.

The distributional data for each species in Cuban territory is presented according to the records listed by Muñoz *et al.* (2010). Distributional expansions are presented for 14 species known from Cuba, and the following species are recorded for the first time from the eastern portion of the country: *Rheumatobates clanis* Drake and Harris, 1932, *R. meinerti* Schroeder, 1931, *Trepobates pictus* (Herrich-Schäffer, 1848) (Gerridae), *Hydrometra australis* Say, 1832 (Hydrometridae), and *Platyvelia brachialis* (Stål, 1860*)* (Veliidae).

Family Gerridae

Limnogonus franciscanus (Stål, 1859)

Known distribution in Cuba. C (HB, CM), E (HG, GR, SC, GT).

New records from Cuba. GT – Río Maya, station 2, 20°14"52" N, 74°8'45" W, 15.I.2010: 3 m, 1 f. Río Maya, station 1, 20°14'9" N, 74°9'0" W, 9.VIII.2009: 9 n, 4 m, 11 f. Río Sabanalamar, station 1, 20°11'32" N, 74°48'0" W, 26.IX.2009: 3 n, 2 m, 1 f. Río Sabanalamar, station 2, 20°11'32" N, 74°48'0" W, 14.V.2010: 16 n, 6 m, 6 f. Río Bano, 20°11'18" N, 75°14'9" W, 18.VI.2008: 1 m. Río Macambo, station 2, 20°4'52" N, 74°45'16" W, 17.IV.2010: 7 n, 5 m, 1 f. Río Yacabo, station 1, 20°4'16" N, 74°40'43" W, 24.X.2008: 1 n, 2 m. Laguna Cardonal, station 1, 20°3'49" N, 74°47'15" W, 1.VII.2009: 16 n, 2 m, 2 f. Laguna Cardonal, station 2, 20°3'40" N, 74°46'56" W, 1.VII.2009: 1 m, 1 f. Laguna Macambo, 20°3'36" N, 74°44'46" W, 29.IV.2009: 5 m. Río Macambo, station 1, 20°3'27" N, 74°44'9" W, 25.X.2008: 4 n. Río Imías, station 1, 20°3'22" N, 74°46'32" W, 9.VIII.2010: 11 n, 3 m, 2 f. Río Yacabo, station 2, 20°3'20" N, 74°41'46" W, 4.X.2008: 3 n, 2 m, 1 f. Estuario Playa Imias, 20°3'18" N, 74°36'38" W, 9.VIII.2010: 2 m, 2 f. Estuario Macambo, 20°3'2" N, 74°43'54" W, 20.VI.2009: 3 n, 3 m, 2 f. Río Yateras, station 2, 20°2'17" N, 75°2'10" W, 17.IV.2010: 5 n. Río Yateras, station 1, 19°59'31" N, 74°59'54" W, 8.V.2008: 1 n, 1 m, 1 f. Río Imías, station 2, 18°46'48" N, 74°39'9" W, 1.X.2010: 4 n, 4 m, 3 f.

Metrobates tumidus Anderson, 1932

Known distribution in Cuba. W (MY), C (HB, MT, SS, CM), E (SC, GT).

New records from Cuba. GT – Río Bano, 20°11'18" N, 75°14'9" W, 18.VI.2008: 1 m, 4 f. Río Macambo, station 2, 20°4'52" N, 74°45'16" W, 17.IV.2010: 4 m, 5 f. Río Macambo, station 1, 20°3'27" N, 74°44'9" W, 25.X.2008: 3 m, 2 f. Río Yacabo, station 2, 20°3'20" N, 74°41'46" W, 4.X.2008:

2 m, 7 f. Río Yateras, station 2, 20°2'17" N, 75°2'10" W, 17.IV.2010: 1 n, 2 m, 3 f. Río Yateras, station 1, 19°59'31" N, 74°59'54" W, 8.V.2008: 5 f.

Rheumatobates clanis Drake and Harris, 1932
Known distribution in Cuba. C (MT).
New records from Cuba. GT – Río Maya, station 2, 20°14"52" N, 74°8'45" W, 15.I.2010: 19 n, 2 m, 1 f. Río Yacabo, station 2, 20°3'20" N, 74°41'46" W, 4.X.2008: 3 f. Estuario Hatibonico, 19°53'7" N, 75°19'21" W, 2.X.2009: 18 n, 3 m, 4 f. [**First records from eastern Cuba**]

Rheumatobates meinerti Schroeder, 1931
Known distribution in Cuba. C (CF).
New records from Cuba. GT – Laguna Macambo, 20°3'36" N, 74°44'46" W, 29.IV.2009: 20 n, 13 m, 21 f. Estuario Macambo, 20°3'2" N, 74°43'54" W, 20.VI.2009: 6 n, 2 m, 5 f. [**First records from eastern Cuba**]

Trepobates pictus (Herrich-Schäffer, 1848)
Known distribution in Cuba. C (CF).
New records from Cuba. GT – Arrollo Baitiquirí, 20°2'55" N, 74°53'4" W, 19.IX.2009: 2 m, 1 f. [**First record from eastern Cuba**]

Trepobates taylori (Kirkaldy, 1899)
Known distribution in Cuba. W (IJ), E (GR, HG, SC).
New records from Cuba. GT – Río Macambo, station 2, 20°4'52" N, 74°45'16" W, 17.IV.2010: 3 m, 1 f. Río Imías, station 1, 20°3'22" N, 74°46'32" W, 9.VIII.2010: 1 m, 2 f. Río Yacabo, station 2, 20°3'20" N, 74°41'46" W, 4.X.2008: 6 n, 1 f. [**First records from Guantánamo**]

Family Hebridae
Merragata hebroides White, 1877
Known distribution in Cuba. C (MT), E (SC).
New records from Cuba. GT – Estuario Playa Imias, 20°3'18" N, 74°36'38" W, 9.VIII.2010: 1 f. Río Imías, station 2, 18°46'48" N, 74°39'9" W, 1.X.2010: 1 m, 3 f. [**First records from Guantánamo**]

Family Hydrometridae
Hydrometra australis Say, 1832
Known distribution in Cuba. C (MC).
New records from Cuba. GT – Laguna Cardonal, station 2, 20°3'40" N, 74°46'56" W, 1.VII.2009: 1 m, 1 f. Río Yateras, station 1, 19°59'31" N, 74°59'54" W, 8.V.2008: 2 m. [**First records from eastern Cuba**]

Hydrometra caraiba Guérin-Méneville, 1857
Known distribution in Cuba. W (PR), C (CF), E (HG).
New records from Cuba. GT – Río Sabanalamar, station 2, 20°11'32" N, 74°48'0" W, 14.V.2010: 2 f. Estuario Macambo, 20°3'2" N, 74°43'54" W, 20.VI.2009: 1 m, 1 f. [**First records from Guantánamo**]

Family Mesoveliidae
Mesovelia mulsanti White, 1879
Known distribution in Cuba. C (HB, MT), E (HG, GR, SC).
New records from Cuba. GT – Río Sabanalamar, station 1, 20°11'32" N, 74°48'0" W, 26.IX.2009: 2 f. Río Yacabo, station 1, 20°4'16" N, 74°40'43" W, 24.X.2008: 4 n, 7 m, 3 f. Laguna Cardonal, station 1, 20°3'49" N, 74°47'15" W, 1.VII.2009: 6 n, 5 m, 1 f. Laguna Cardonal, station 2, 20°3'40" N, 74°46'56" W, 1.VII.2009: 2 m, 8 f. Río Imías, station 1, 20°3'22" N, 74°46'32" W, 9.VIII.2010: 9 n, 5 m, 2 f. Estuario Playa Imias, 20°3'18" N, 74°36'38" W, 9.VIII.2010: 3 f. Arrollo Baitiquirí, 20°2'55" N, 74°53'4" W, 19.IX.2009: 1 m. Río Yateras, station 1, 19°59'31" N, 74°59'54" W, 8.V.2008: 2 n, 2 m. Río Imías, station 2, 18°46'48" N, 74°39'9" W, 1.X.2010: 2 f. [**First records from Guantánamo**]

Family Veliidae
Microvelia cubana Drake, 1951
Known distribution in Cuba. W (IJ), C (HB, CM), E (SC, GT).
New records from Cuba. GT – Río Maya, station 2, 20°14"52" N, 74°8'45" W, 15.I.2010: 4 n, 12 m, 23 f. Río Maya, station 1, 20°14'9" N, 74°9'0" W, 9.VIII.2009: 10 n, 49 m, 83 f. Río Sabanalamar, station 1, 20°11'32" N, 74°48'0" W, 26.IX.2009: 8 n, 15 m, 21 f. Río Macambo, station 2, 20°4'52" N, 74°45'16" W, 17.IV.2010: 29 m, 23 f. Río Yacabo, station 1, 20°4'16" N, 74°40'43" W, 24.X.2008: 9 n, 20 m, 31 f. Laguna Cardonal, station 1, 20°3'49" N, 74°47'15" W, 1.VII.2009: 4 n, 1 f. Laguna Cardonal, station 2, 20°3'40" N, 74°46'56" W, 1.VII.2009: 10 m, 20 f. Río Macambo, station 1, 20°3'27" N, 74°44'9" W, 25.X.2008: 3 n, 3 f. Río Imías, station 1, 20°3'22" N, 74°46'32" W, 9.VIII.2010: 10 n, 35 m, 32 f. Río Yacabo, station 2, 20°3'20" N, 74°41'46" W, 4.X.2008: 3 n, 15 m, 16 f. Estuario Playa Imias, 20°3'18" N, 74°36'38" W, 9.VIII.2010: 8 n, 31 m, 17 f. Estuario Macambo, 20°3'2" N, 74°43'54" W, 20.VI.2009: 5 n, 14 m, 18 f. Arrollo Baitiquirí, 20°2'55" N, 74°53'4" W, 19.IX.2009: 6 n, 25 m, 22 f. Río Yateras, station 2, 20°2'17" N, 75°2'10" W, 17.IV.2010: 4 n, 5 m, 6 f. Río Imías, station 2, 18°46'48" N, 74°39'9" W, 1.X.2010: 15 m, 26 f.

Microvelia longipes Uhler, 1894
Known distribution in Cuba. E (SC).
New records from Cuba. GT – Río Maya, station 1, 20°14'9" N, 74°9'0" W, 9.VIII.2009: 5 m, 20 f. [**First record from Guantánamo**]

Platyvelia brachialis (Stål, 1860)
Known distribution in Cuba. W (PR).
New records from Cuba. GT – Estuario Macambo, 20°3'2" N, 74°43'54" W, 20.VI.2009: 1 f. [**First record from eastern Cuba**]

Rhagovelia collaris (Burmeister, 1835)
Known distribution in Cuba. W (PR), C (HB, VC, SS, CM), E (HG, GR, SC, GT).
New records from Cuba. GT – Río Sabanalamar, station 1, 20°11'32" N, 74°48'0" W, 26.IX.2009: 10 m, 6 f. Río Sabanalamar, station 2, 20°11'32" N, 74°48'0" W, 14.V.2010: 5 m, 12 f. Río Bano, 20°11'18" N, 75°14'9" W, 18.VI.2008: 9 n, 6 m, 4 f. Río Macambo, station 2, 20°4'52" N, 74°45'16" W, 17.IV.2010: 1 m, 2 f. Río Yacabo, station 1, 20°4'16" N, 74°40'43" W, 24.X.2008: 1 n, 4 m, 1 f. Río Macambo, station 1, 20°3'27" N, 74°44'9" W, 25.X.2008: 4 n, 9 m, 5 f. Río Yacabo, station 2, 20°3'20" N, 74°41'46" W, 4.X.2008: 5 n, 10 m, 5 f. Arrollo Baitiquirí, 20°2'55" N, 74°53'4" W, 19.IX.2009: 3 n, 11 m, 14 f. Río Yateras, station 2, 20°2'17" N, 75°2'10" W, 17.IV.2010: 2 m, 6 f. Río Yateras, station 1, 19°59'31" N, 74°59'54" W, 8.V.2008: 5 n, 5 m.

Acknowledgments: We would like the friend Darwins Rodríguez Mesa for his collaboration during the field work and to the project as a whole, and to José Inacio Ricardo Ribeiro and an anonymous referee for their suggestions to the manuscript. This study benefited from the project CUB/SGP/OP4/CORE/08/04, supported by PPD-GEF.

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Received: December 2011
Accepted: March 2012
Published online: May 2012
Editorial responsibility: Rodrigo M. Feitosa